As patients advance through the model, their BMD progresses and they are at risk of fracture (hip, vertebral, other) and of death. BMD changes, fracture risks and mortality were all based on the Dubbo Osteoporosis Epidemiology Study (DOES). Utility values were based on the patients fracture status. Evidence for the efficacy of alendronate in the prevention of fracture was the clinical fracture arm of the Fracture Intervention Trial (FIT). **RESULTS:** The incremental cost per QALY of broadening access to alendronate compared with current practice was $34,808 (incremental costs of $783 per patient with 0.0225 QALYs gained). Broadening access to alendronate resulted in fewer fracture-related deaths (301 per 100,000 population), hip fractures (904), vertebral fractures (259) and other fractures (1098). **CONCLUSIONS:** Broadening primary prevention treatment of osteoporotic fracture with alendronate to individuals aged ≥70 years with BMD T–scores ≤ – 2.5 will prevent fractures and save lives at good value-for-money.

PMS42

COST-EFFECTIVENESS OF INCREASING BISPHOSPHONATES ADHERENCE FOR OSTEOPOROSIS IN COMMUNITY PHARMACIES

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OBJECTIVES: Increasing real-life adherence to bisphosphonates therapy is important to achieve the clinical benefits of reducing fractures reported in randomized clinical trials (RCTs). The aim of this pharmacoeconomic analysis was to determine the cost-effectiveness of a pharmaceutical care intervention program in community pharmacies, aimed to increase bisphosphonates adherence for the prevention of osteoporotic fractures. **METHODS:** A decision analytical model was constructed with a time horizon of three years, discounting at 4.0% and 1.5% annually for costs and effects, respectively. A Dutch healthcare provider's perspective was adopted. Adherence and efficacy data were gathered from a Dutch pharmaceutical care program in community pharmacies (the MeMO intervention). The association between bisphosphonate adherence and osteoporotic fractures was modelled using Dutch clinical studies. Recent and upcoming reimbursement policy changes in The Netherlands were modelled with a scenario of therapeutic substitution, characterized by drastically lower drug prices. **RESULTS:** Adherence to bisphosphonates therapy in The Netherlands was 68.3%. The pharmaceutical care intervention program increased bisphosphonates adherence to 83.9% ($P<0.001$). If the intervention program would be introduced nationwide in community pharmacies, 337 osteoporotic fractures would be prevented and 47 quality-adjusted life years (QALYs) would be gained. Additional medication and intervention costs were €1,738,000; the cost-savings due to reduced fractures were €998,000. The cost-effectiveness of the pharmaceutical care intervention was €16,000 per QALY. When drug prices decline following therapeutic substitution policies, the intervention will be cost-saving. **CONCLUSIONS:** Pharmaceutical care programs in community pharmacies, such as the MeMO intervention, can improve bisphosphonate adherence, resulting in a considerable number of osteoporotic fractures being prevented. Therapeutic substitution policies that lower drug prices will increase the cost-effectiveness of interventions that increase adherence. This study demonstrates the value of pharmaceutical care programs in community pharmacies to increase therapy adherence.

PMS43

COST-MINIMIZATION ANALYSIS OF COLLAGENASE CLOSTRIDIUM HISTOLYTICUM COMPARED WITH FASCIECTOMY IN PATIENTS WITH DUPUYTREN'S CONTRACTURE IN PORTUGAL

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OBJECTIVES: Dupuytren's contracture (DC) is a progressive disorder that limits hand function and impacts on patient's ability to work or to perform their daily activities. Current standard of care is limited fasciectomy, a surgical procedure that removes part of the affected cord. *Collagenase clostridium* histolyticum (CCH) is the first licensed pharmacological treatment for DC patients with a palpable cord. This study aims to estimate costs of CCH versus fasciectomy in Portuguese DC patients. **METHODS:** A cost minimization approach was adopted, with effectiveness assumed to be equivalent for CCH and fasciectomy. Resource use was elicited through a panel of five Portuguese experts with extensive clinical experience. Fasciectomy' direct costs of included surgery in-patient cost and post-surgery costs: follow up outpatient visits and physiotherapy. CCH' direct costs included vials costs, administration of injection in an outpatient setting and a follow up outpatient visit. Fasciectomy induced indirect costs were estimated by the human capital method. Unit costs were extracted from Portuguese literature and official sources. Societal perspective was adopted. **RESULTS:** Average direct cost per patient for CCH and fasciectomy were respectively 2,099€ and 2,366€. Average saving per patient is 267€, a reduction of 11% direct fasciectomy costs. Although inclusion of indirect costs can introduce some uncertainty due to measurement error, they should be analysed given their relevance to the society: average saving per patient estimate is 1,407€ when we include productivity costs. **CONCLUSIONS:** CCH is a convenient, minimally invasive, effective and generally well tolerated alternative to surgery for DC' patients. Adoption of CCH as an alternative to fasciectomy offers a choice for DC' patients, and provides an efficient approach to the treatment of DC by reducing the demand for physiotherapy and in-patient services. On average, CCH is cost saving in Portugal compared with fasciectomy and induces superior savings when indirect costs are included.

PMS44

COST-EFFECTIVENESS OF DENOSUMAB IN THE TREATMENT OF POSTMENOPAUSAL OSTEOPOROSIS IN SCOTLAND

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OBJECTIVES: Denosumab has been shown to be a cost-effective use of NHS resources for the treatment of postmenopausal osteoporosis in England and Wales. This study assessed the cost-effectiveness of denosumab given Scottish treatment and resource use patterns. **METHODS:** A probabilistic model employed in a recent submission to NICE was used with resource use amended to reflect local expert advice. This indicated zoledronate requires an annual pre-infusion assessment appointment and that patients failing on, or unable to take oral bisphosphonates are referred to secondary care for advice on further treatment. Denosumab is modelled as initiated in secondary care, with subsequent injections in primary care. Fracture risk for 70 year old women with bone mineral density T-score <-2.5 was based on a published algorithm and accounted for prior fracture. Relative efficacy of osteoporosis therapies was based on meta-analysis and adjusted indirect comparison. Utilities reflected patients' age and modelled health states. All therapies' administration was costed using NHS Reference and PSSRU costs. Drug costs were from the British National Formulary. Costs and utilities were discounted at 3.5%. **RESULTS:** Denosumab dominated strontium ranelate and IV ibandronate in both cohorts, and was cost-effective versus raloxifene (£4,339/QALY without prior fracture and dominant in patients with prior fracture). Denosumab was also cost-effective against no treatment: cost/QALY £22,380 and £9,618 in patients without and with prior fracture respectively. IV zoledronate and denosumab each produced very similar QALYs in the two cohorts, however, denosumab's costs were approximately £1,000 lower in each. Zoledronate's cost/QALY ratios against denosumab were £120,000 and £50,000, i.e. zoledronate was not cost-effective against denosumab. Denosumab had the greater probabilities of being cost-effective at threshold values of £30,000/QALY in both cohorts. **CONCLUSIONS:** Denosumab was shown to be cost-effective against all comparators in both primary and secondary care settings. Compared with zoledronate, denosumab may be a better use of NHS resources.

PMS45

COST-UTILITY AND BUDGET IMPACT ANALYSIS OF CERTOLIZUMAB PEGOL PLUS METHOTREXATE FOR THE TREATMENT OF MODERATE-TO-SEVERE ACTIVE RHEUMATOID ARTHRITIS IN GREECE

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OBJECTIVES: To evaluate the cost-utility and budget impact (BI) of certolizumab pegol (CZP) as an add-on therapy to methotrexate (MTX) versus other first line biological DMARDs, in the treatment of adult patients with active RA who did not respond adequately to DMARDs, including MTX, in Greece. **METHODS:** A Markov (cohort health state transition) model was developed to evaluate the cost-utility of CZP versus other TNF-α inhibitors recommended in Greece (etanercept [ETA], adalimumab [ADA] and infliximab [IFX]). Treatment efficacy was measured using the ACR-responses (ACR20/50/70) at 6 months. ACR estimated rates were based on adjusted indirect comparison (MTX as common comparator) of published clinical trials. Utilities were derived from EQ-5D data from CZP RA clinical trials. Clinical history/resource use data came from published literature. Sensitivity analyses were conducted. The BI of CZP as an add-on therapy to MTX was estimated from payer perspective over 2011–2015. The alternatives to CZP include all TNF-α inhibitors recommended in Greece (etanercept, adalimumab, infliximab, golimumab). Epidemiological data were used to estimate the RA population eligible for CZP therapy. Published 2011 hospital unit costs (drug acquisition, administration, monitoring, resources) in both analyses were taken from Greek routine sources/expert opinion. Base case analysis assumed a payer perspective, costs discounted at 3.5% (CU/BI), a lifetime horizon, with outcomes discounted at 3.5% (CU), 75kg patient-fixed average weight (BI). **RESULTS:** Base case analysis indicated that CZP is cost-effective compared with all combination therapies considered (at €60,000(3xGDP/capita) willingness-to-pay threshold), with an incremental cost-effectiveness ratio of €19,181/QALYs, €32,208/QALYs, €22,349/QALYs versus ADA+MTX, ETA+MTX and IFX+MTX, respectively. In terms of BI, the introduction of CZP on the Greek market produced cumulative net savings of €7.68M during 2011–2015. **CONCLUSIONS:** This analysis shows that CZP+MTX is cost-effective versus. the other TNF-α inhibitors recommended in Greece for the treatment of RA and its use is anticipated to result in budgetary net savings.

PMS46

COST-UTILITY ANALYSIS OF CERTOLIZUMAB PEGOL VERSUS ALTERNATIVE TUMOR NECROSIS FACTOR-INHIBITORS, FOR THE TREATMENT OF MODERATE-TO-SEVERE RHEUMATOID ARTHRITIS IN SPAIN

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OBJECTIVES: To evaluate the cost-utility of CZP compared with standard-of-care first-line administered TNF-inhibitors + MTX in the treatment of moderate-to-severe RA in Spain. **METHODS:** A Markov (cohort health state transition) model was developed to evaluate the cost-utility of CZP versus the other TNF-inhibitors licensed and recommended in Spain (etanercept [ETA], adalimumab [ADA], and